INITIALIZATION METHOD FOR AN
ENTERTAINMENT AND COMMUNICATIONS NETWORK
Inventor: TOMASETTI, et. al
Appln. No. 09/849,198 Filed: May 4, 2001
Docket number 7261/69493
Kenneth H. Samples, Esq.
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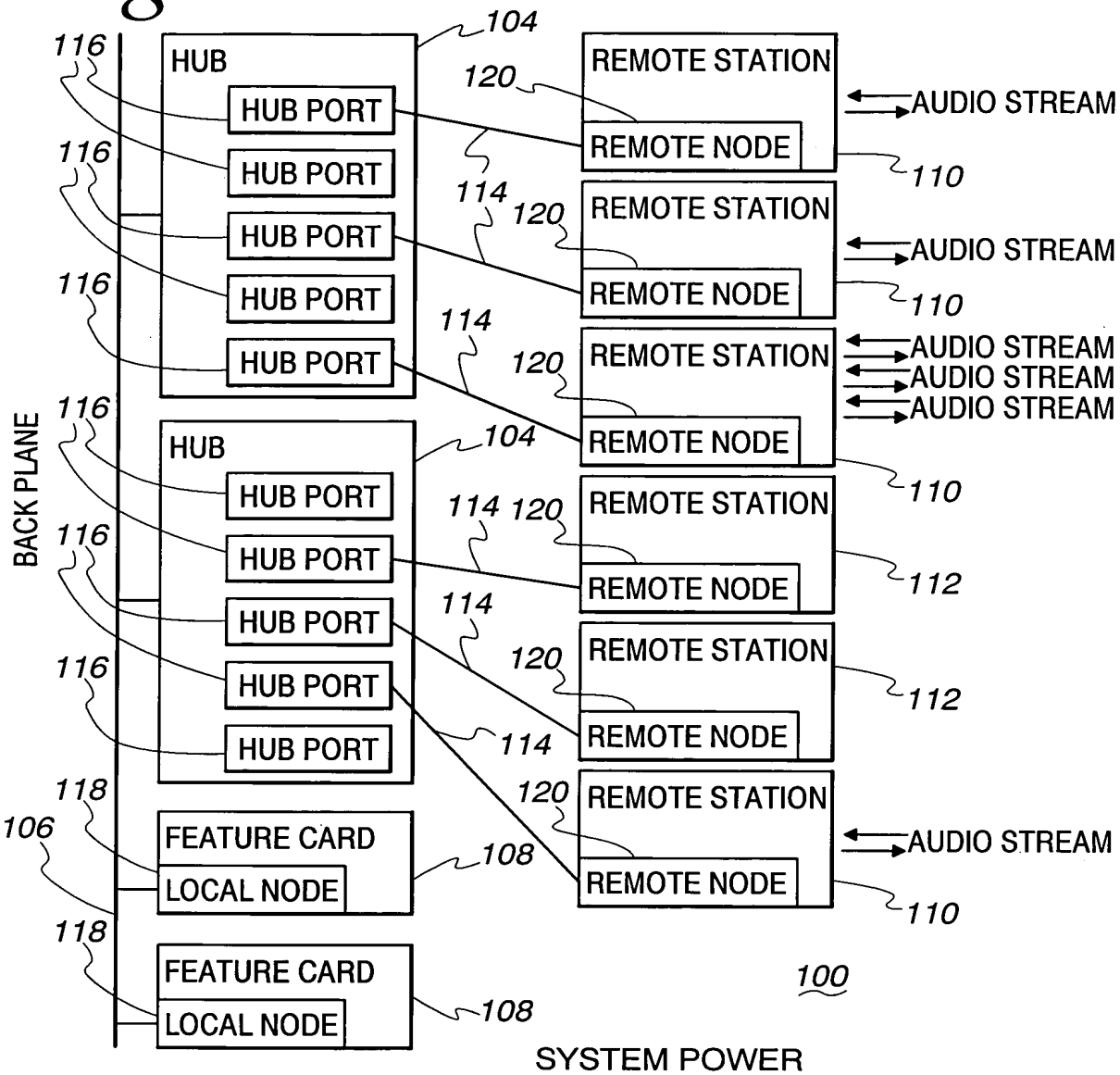
Telephone: (312)577-7000

Fig. 1



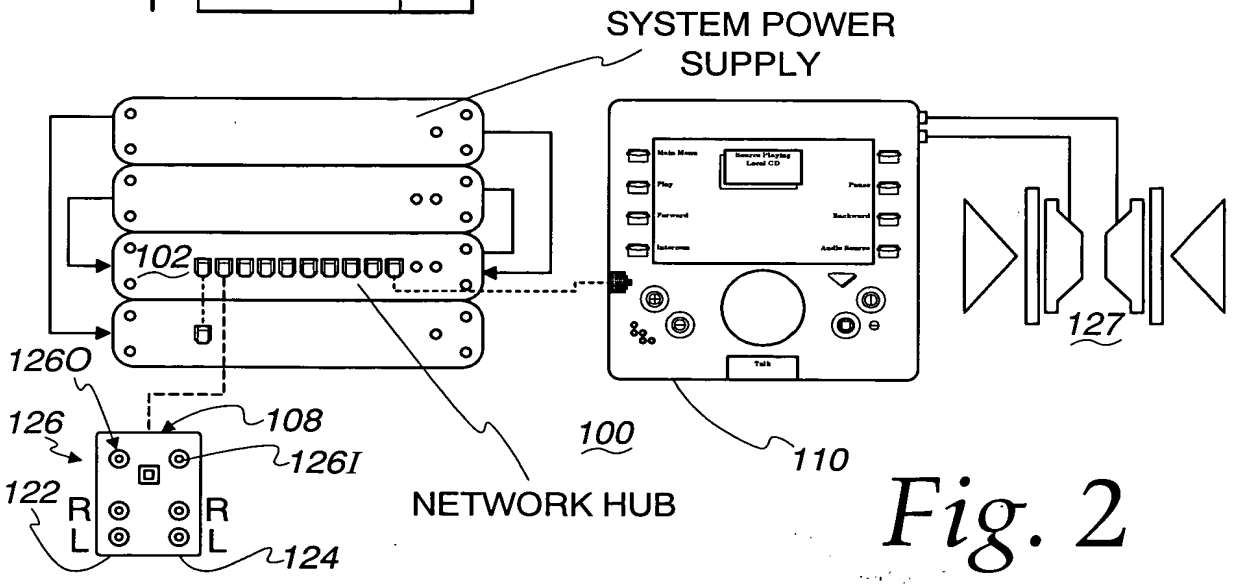


Fig. 2

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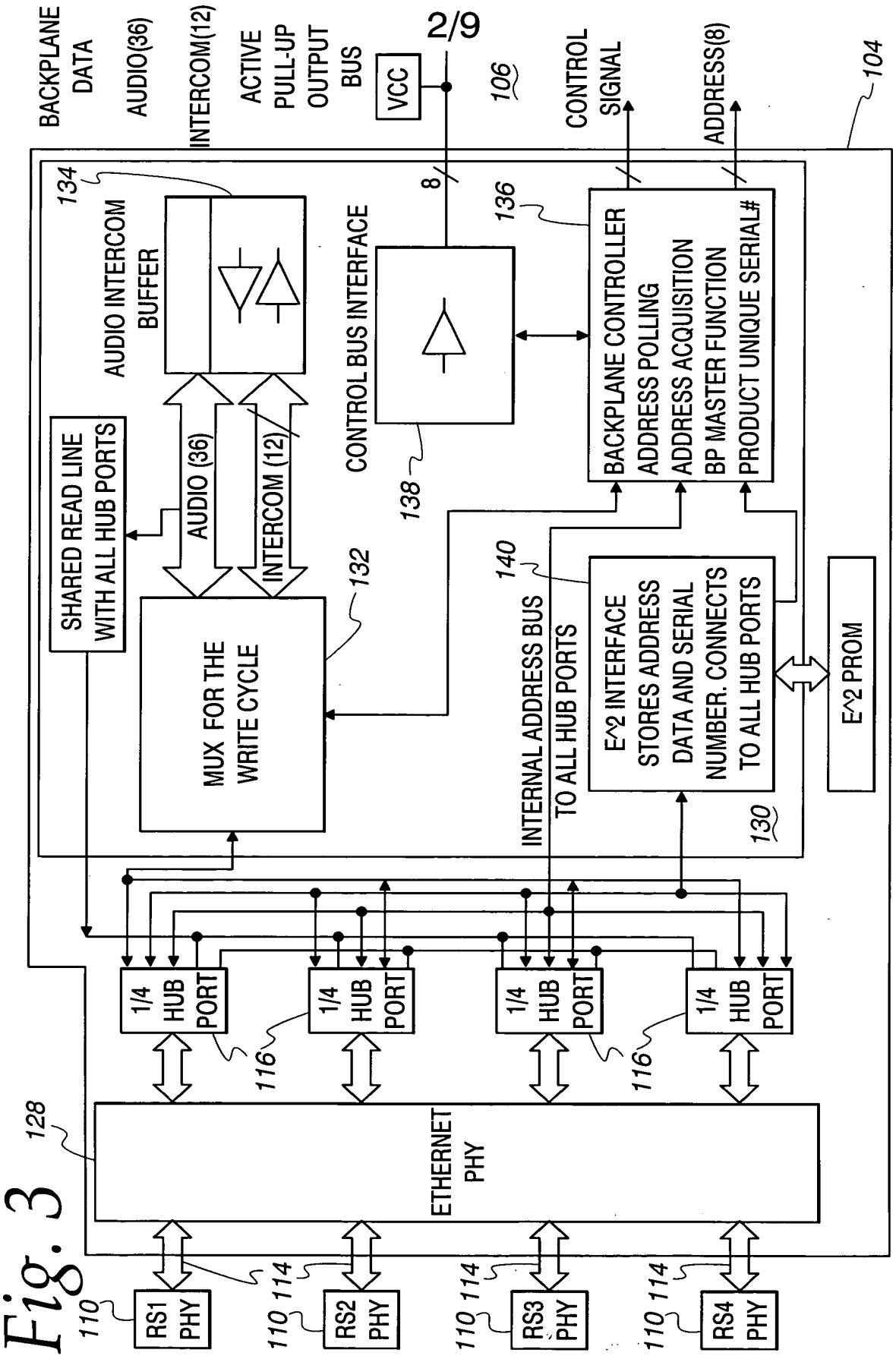

Fig. 3

Fig. 4A

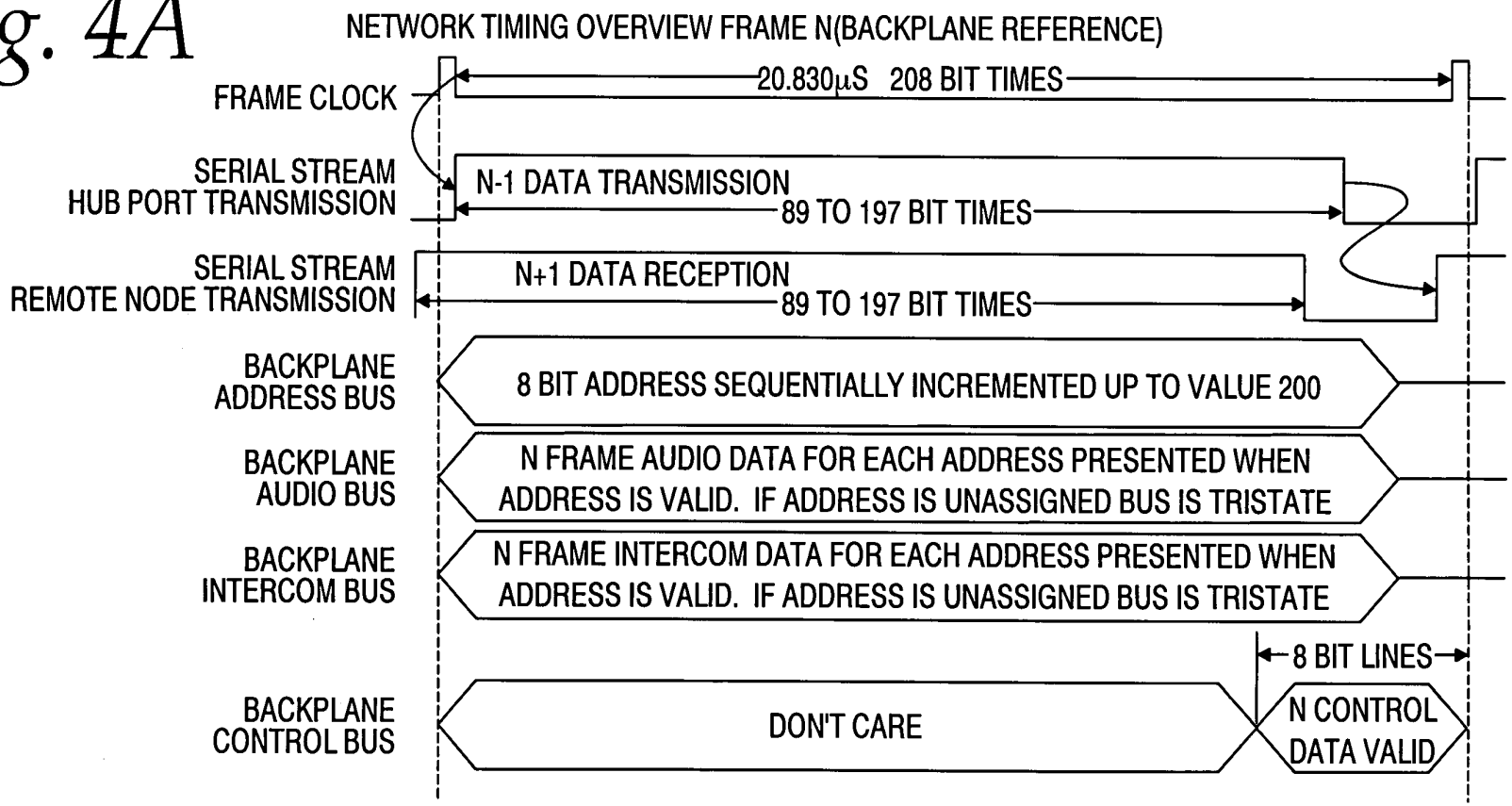

Fig. 4B

PREAMBLE	CBS	HUB CONTROL	DATA	ICOM	LEFT AUDIO 1	RIGHT AUDIO 1	LEFT AUDIO 2	RIGHT AUDIO 2	LEFT AUDIO 3	RIGHT AUDIO 3	LEFT AUDIO 4	RIGHT AUDIO 4
AAAAABh	CBS	HC7... HC0	D7... D0	I7... I0	A1L17... A1L0	A1R17... A1R0	A1L17... A2L0	A2R17... A2R0	A3L17... A3L0	A3R17... A3R0	A4L17... A4L0	A4R17... A4R0

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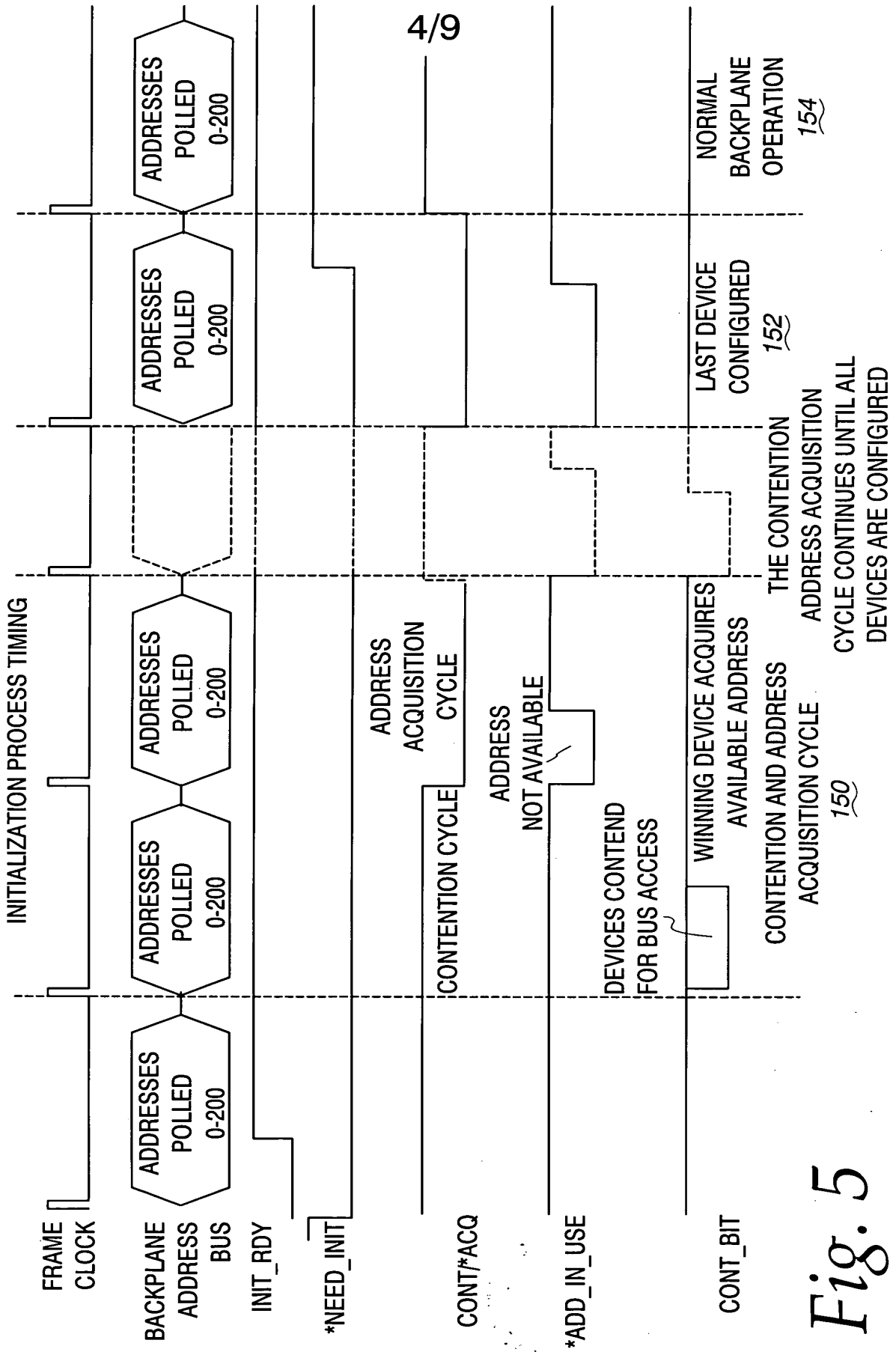

INITIALIZATION PROCESS TIMING
FRAME CLOCK
BACKPLANE ADDRESS BUS
INIT_RDY
*NEED_INIT
CONT/*ACQ
*ADD_IN_USE
CONT_BIT
ADDRESSES POLLED 0-200
ADDRESSES POLLED 0-200
ADDRESSES POLLED 0-200
ADDRESSES POLLED 0-200
CONTENTION CYCLE
ADDRESS ACQUISITION CYCLE
ADDRESS NOT AVAILABLE
DEVICES CONTEND FOR BUS ACCESS
WINNING DEVICE ACQUIRES AVAILABLE ADDRESS
CONTENTION AND ADDRESS ACQUISITION CYCLE
150
THE CONTENTION ADDRESS ACQUISITION CYCLE CONTINUES UNTIL ALL DEVICES ARE CONFIGURED
LAST DEVICE CONFIGURED
152
NORMAL BACKPLANE OPERATION
154

Fig. 5

Fig. 6

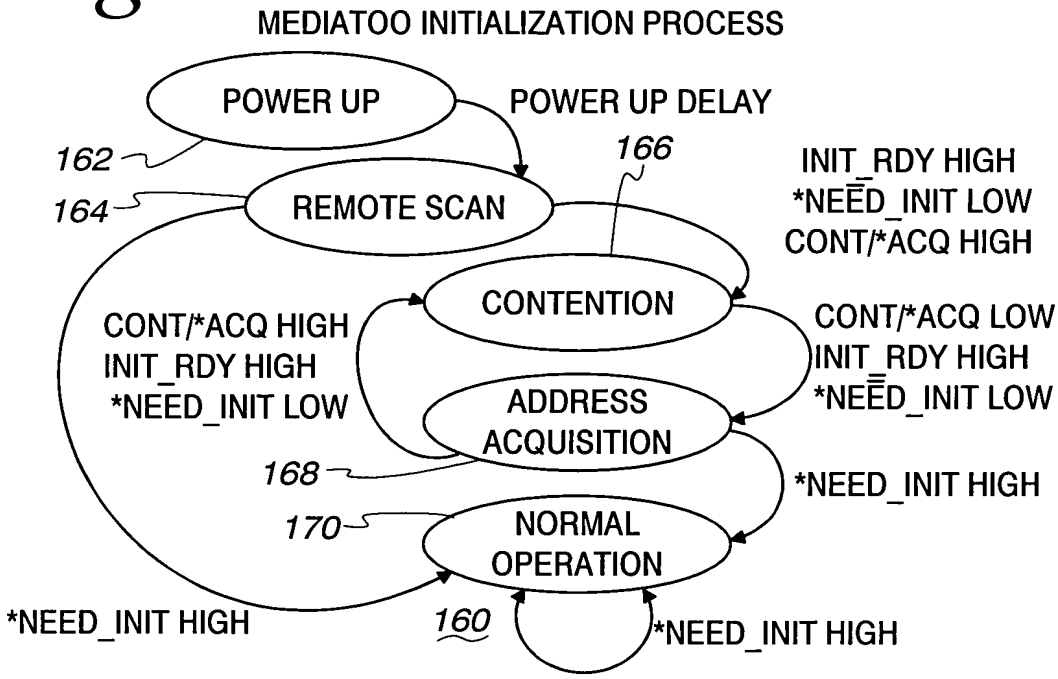

MEDIATOO INITIALIZATION PROCESS
POWER UP
POWER UP DELAY
162
166
INIT_RDY HIGH
*NEED_INIT LOW
CONT/*ACQ HIGH
164
REMOTE SCAN
CONTENTION
CONT/*ACQ HIGH
INIT_RDY HIGH
*NEED_INIT LOW
CONT/*ACQ LOW
INIT_RDY HIGH
*NEED_INIT LOW
ADDRESS
ACQUISITION
168
*NEED_INIT HIGH
170
NORMAL
OPERATION
*NEED_INIT HIGH
160
*NEED_INIT HIGH

Fig. 7a

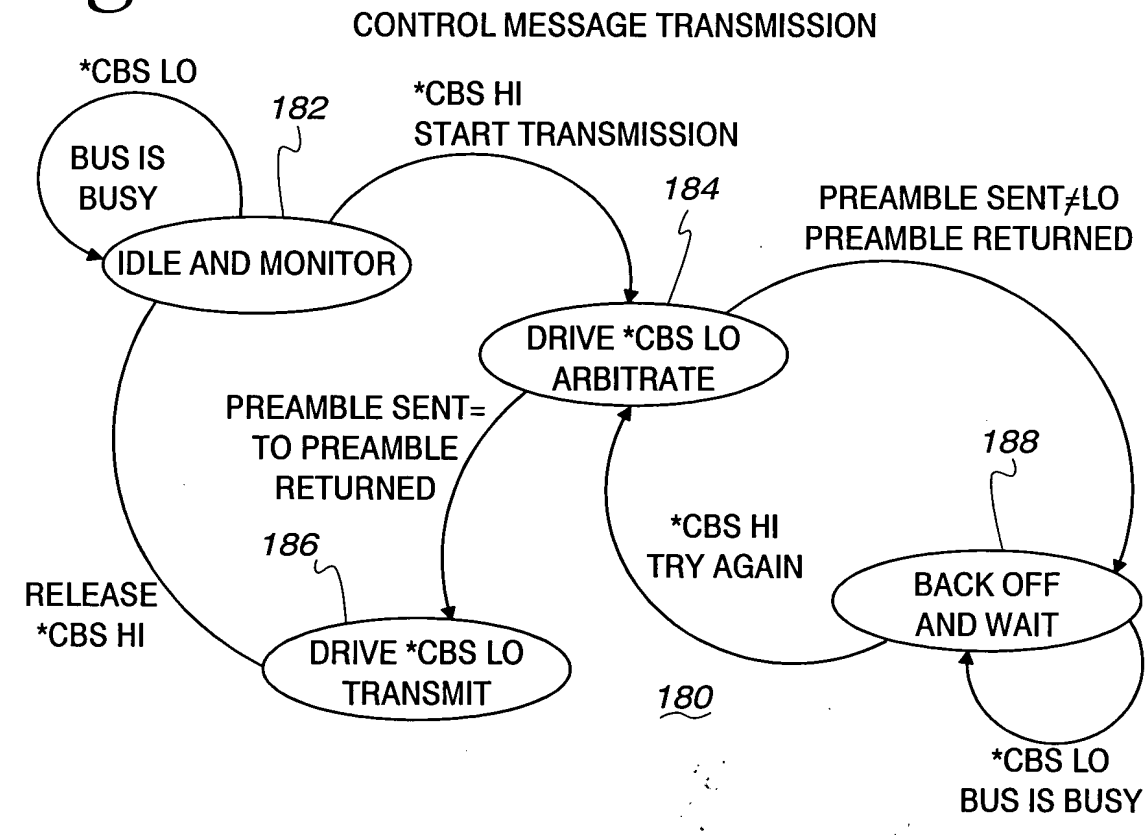
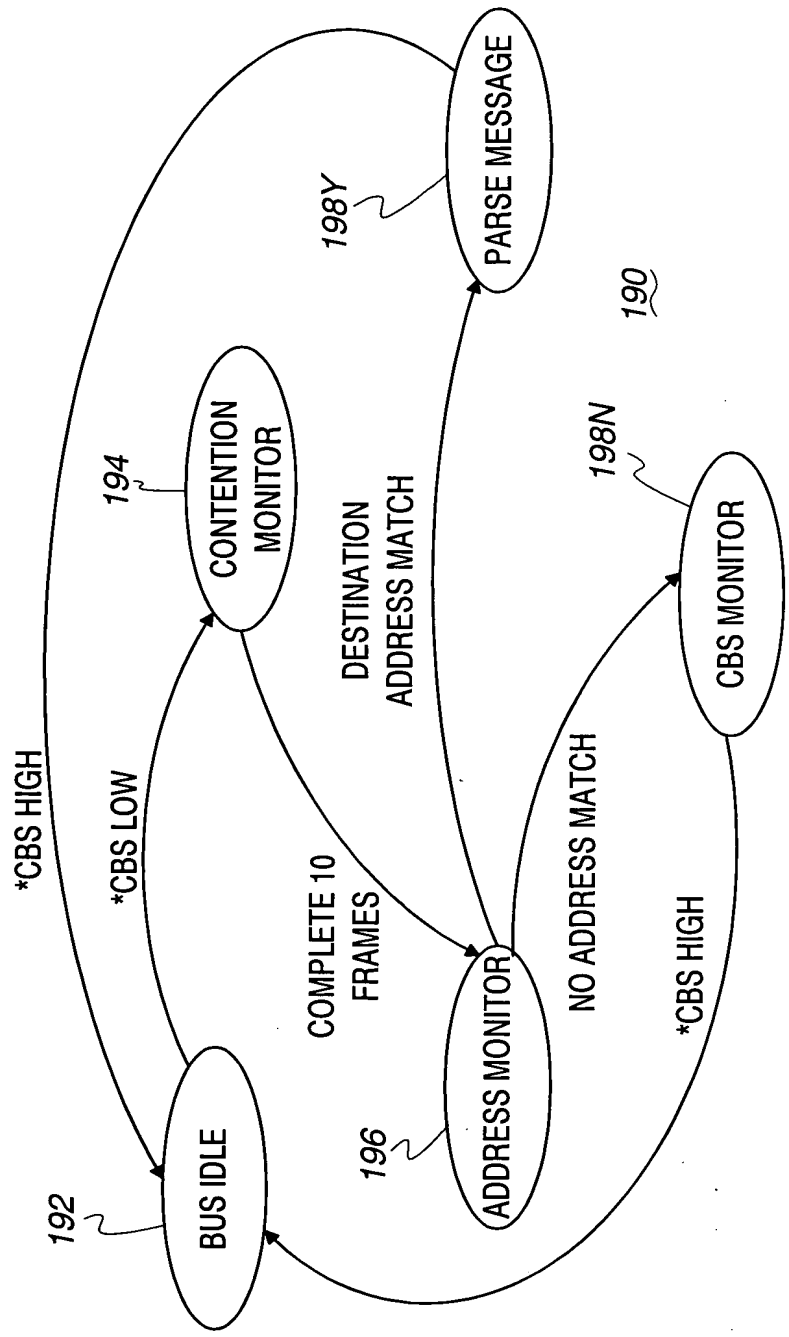

CONTROL MESSAGE TRANSMISSION
*CBS LO
BUS IS
BUSY
182
*CBS HI
START TRANSMISSION
184
PREAMBLE SENT≠LO
PREAMBLE RETURNED
IDLE AND MONITOR
DRIVE *CBS LO
ARBITRATE
PREAMBLE SENT=
TO PREAMBLE
RETURNED
188
*CBS HI
TRY AGAIN
186
RELEASE
*CBS HI
BACK OFF
AND WAIT
DRIVE *CBS LO
TRANSMIT
180
*CBS LO
BUS IS BUSY

Fig. 7b

PREAMBLE	DESTINATION ADDRESS	SOURCE ADDRESS	NUMBER OF BYTES IN PAYLOAD	PAYLOAD	CHECKSUM	
10 BYTES	1 BYTE	1 BYTE	2 BYTES	0-65KBYTES	2 BYTES	

Fig. 8



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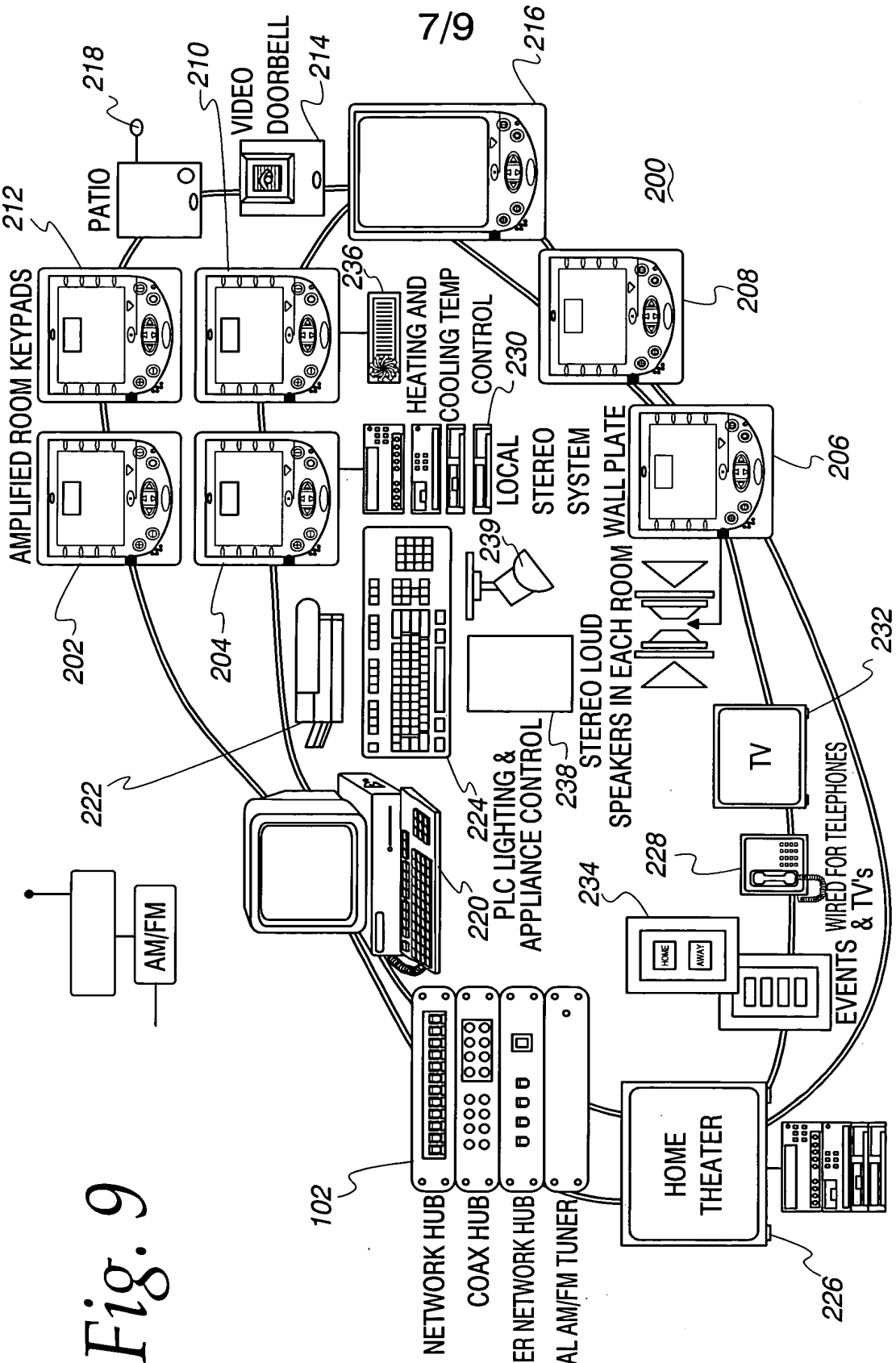


Fig. 9

Fig. 10

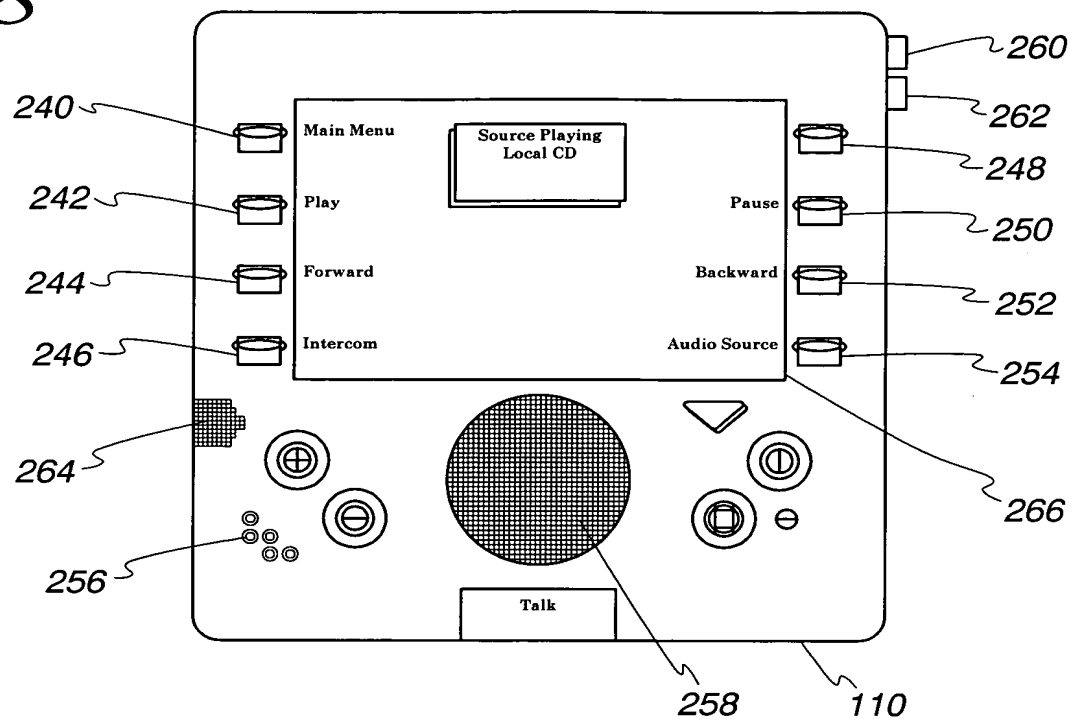

240
242
244
246
264
256
260
262
248
250
252
254
266
258
110
Main Menu
Source Playing
Local CD
Play
Pause
Forward
Backward
Intercom
Audio Source
Talk

Fig. 11

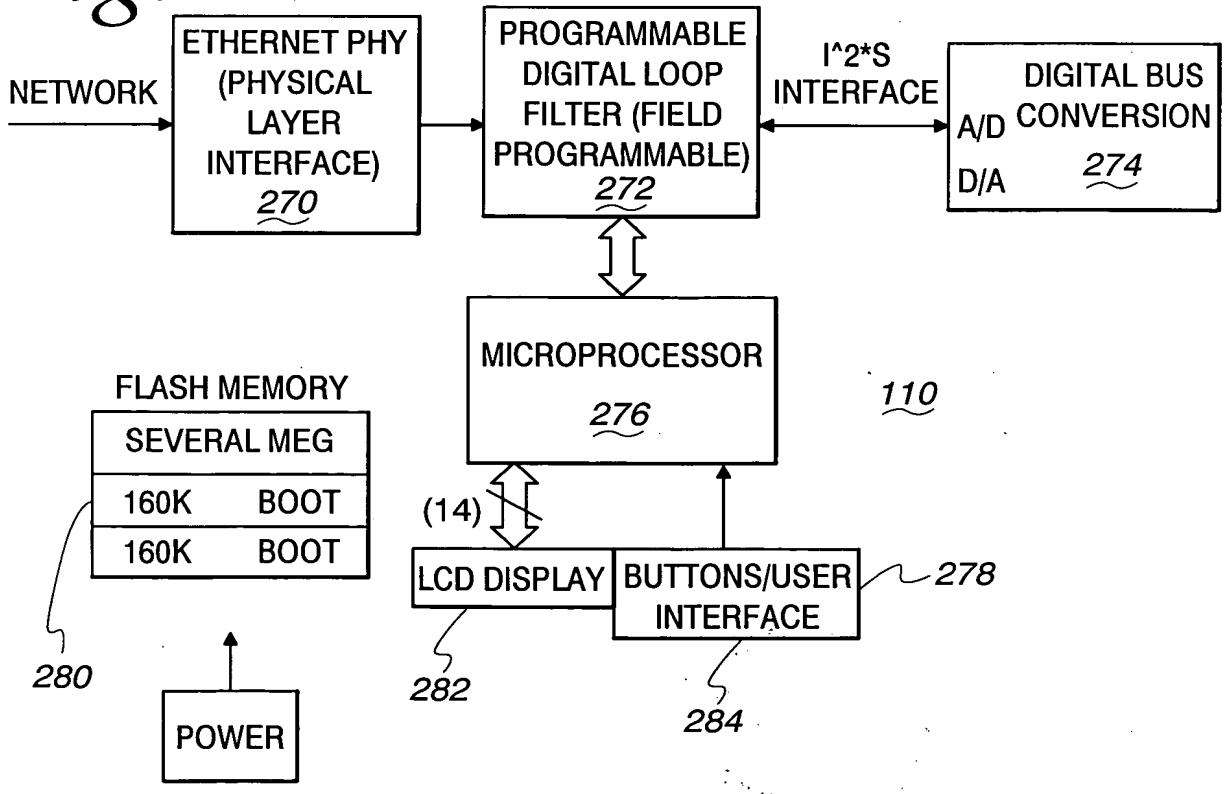
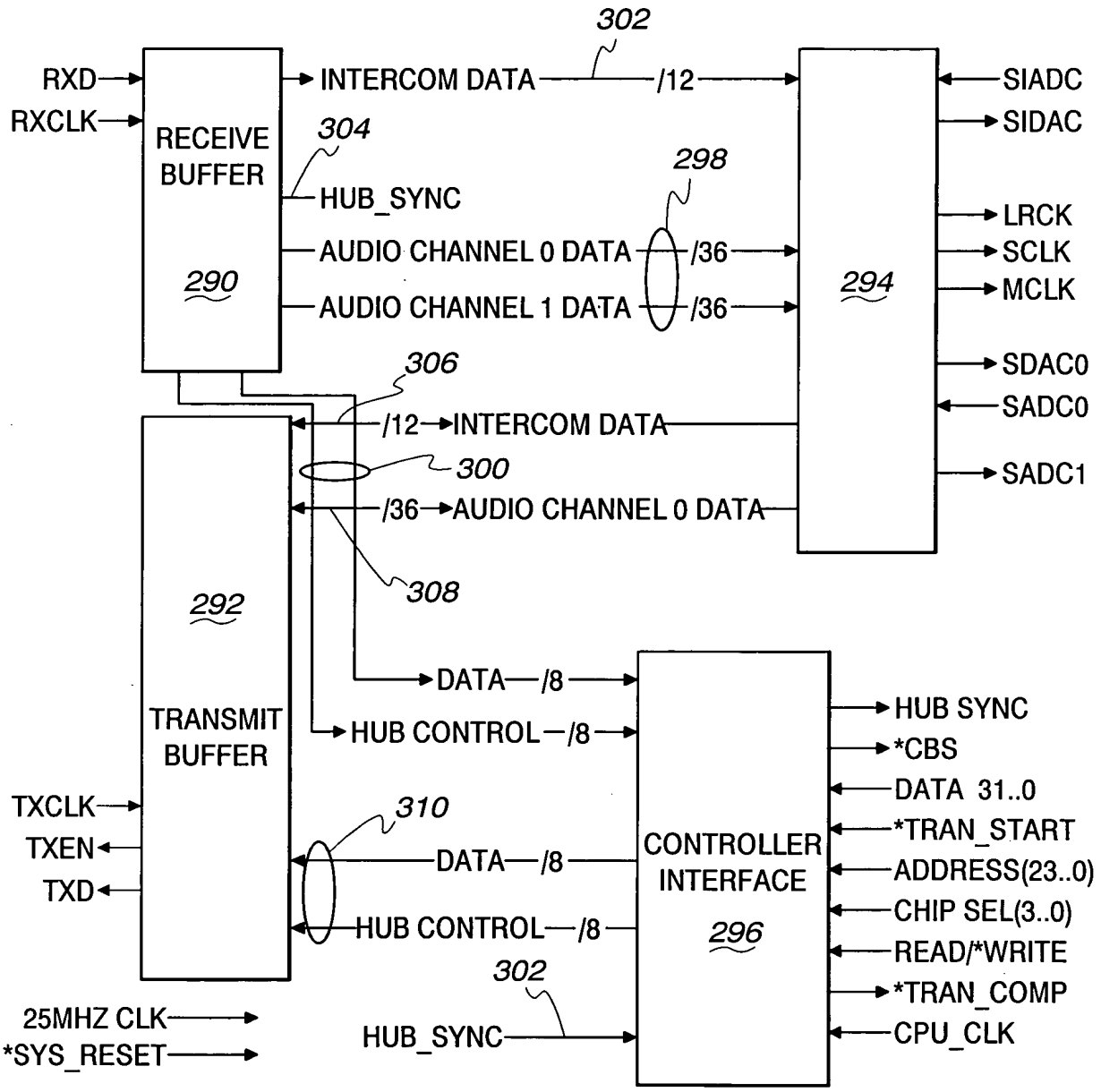

NETWORK
ETHERNET PHY (PHYSICAL LAYER INTERFACE) 270
PROGRAMMABLE DIGITAL LOOP FILTER (FIELD PROGRAMMABLE) 272
I^2*S INTERFACE
DIGITAL BUS CONVERSION A/D D/A 274
MICROPROCESSOR 276
110
FLASH MEMORY
SEVERAL MEG
160K BOOT
160K BOOT
280
POWER
(14)
LCD DISPLAY
BUTTONS/USER INTERFACE
278
282
284

Fig. 12


302
RXD
RXCLK
RECEIVE BUFFER
290
INTERCOM DATA
/12
304
HUB_SYNC
298
AUDIO CHANNEL 0 DATA
/36
AUDIO CHANNEL 1 DATA
/36
294
SIADC
SIDAC
LRCK
SCLK
MCLK
SDAC0
SADC0
SADC1
306
/12
INTERCOM DATA
300
/36
AUDIO CHANNEL 0 DATA
308
292
TRANSMIT BUFFER
DATA
/8
HUB CONTROL
/8
TXCLK
TXEN
TXD
310
DATA
/8
HUB CONTROL
/8
CONTROLLER INTERFACE
296
HUB SYNC
*CBS
DATA 31..0
*TRAN_START
ADDRESS(23..0)
CHIP SEL(3..0)
READ/*WRITE
*TRAN_COMP
CPU_CLK
302
HUB_SYNC
25MHZ CLK
*SYS_RESET